



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/661,537  | 09/15/2003  | Raita Doi            | 040894-5955         | 8035             |
| 9629  | 7590        | 10/05/2006           | EXAMINER            |                  |
| MORGAN LEWIS & BOCKIUS LLP<br>1111 PENNSYLVANIA AVENUE NW<br>WASHINGTON, DC 20004 |             |                      | TAWFIK, SAMEH       |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 3721                |                  |

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/661,537             | DOI, RAITA          |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Sameh H. Tawfik        | 3721                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 12-15, 17 and 22-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 16, 18-21 and 31-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10, 16, 18-21, and 31-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Viens (5,554,094).

Viens discloses a sheet folding apparatus comprising a sheet folding unit which applies at least letter folding on a sheet (Figs. 1, 2-4, 5A, 5B, and 6A); an auto folding mode selecting device (via folding station 12 and a computer processing unit including two keyboard/monitor units 14A and 14B; column 4, lines 24-27) which selectively causes the sheet folding unit to operate in one of a plurality of folding modes including at least letter C-folding, letter Z-folding, and Z-folding (Figs. 1-4; column 4, lines 40-44 and 61-64 and column 2, lines 21-23; via the different types folds accomplished by folding apparatus 12).

Note that as disclosed in column 4, line 64 “the folding apparatus 12 is set up by the user.”; the “user” could automatically select which folding mode to use as in column 4, lines 24-27 “A computer processing unit (not shown) including two key board/monitor units 14A, 14B allows the user to track the operation of the system 10.”

Regarding claim 2: further comprising a control device which controls the sheet folding unit in accordance with a folding mode selected by the folding mode selecting device (column 4, lines 24, 25, and 31-36) via the computer processing unit monitor each document 18 as it

Art Unit: 3721

proceeds through the system and as shown in Figs. 2-4 document 18 in C fold, Z fold, or half fold done by the folding apparatus 12 as shown in Fig. 5A.

Regarding claim 4: wherein the sheet folding unit (12) comprises a plurality of folding mechanisms in a sheet path (Figs. 5A and 5B).

Regarding claim 5: wherein at least one of the folding mechanisms comprises a folding position changing mechanism which can change a sheet folding position (Figs. 5A; via adjustable stoop 74 and 86).

Regarding claim 6: wherein among the folding mechanisms an upstream folding mechanism comprises a skew correcting mechanism which applies skew correction on the sheet (Figs. 5A and 5e) via when the sheets stop by the adjustable stop 86 will cause the sheet to curve and fold as shown in Fig. 5e.

Regarding claim 7: wherein at least one of the folding mechanisms comprises a folding member which is disposed in a sheet path to nip-transport the sheet (Fig. 5A; via 80 and 90); a transport member (Fig. 5A; via in-feed device 42, 60, 62 and nip 76) which is disposed in the sheet path upstream from the folding member (80 and 90) to nip-transport the sheet; and a tip end guide member (via adjustable stop 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet.

Regarding claim 8: wherein the folding mechanism comprises a folding position changing mechanism which moves the tip end guide member (86) that is movable, to enable a sheet folding position to be changed (Fig. 5B).

Regarding claim 9: wherein in the folding mechanism (80 and 90) a skew correcting mechanism which applies skew correction on the sheet configured by the transport member

Art Unit: 3721

which can perform nipping (via 76) and releasing operations, and the tip end guide member (86), see for example (Figs. 5A and 5e).

Regarding claim 10: wherein after tip end of the sheet butts against the tip end guide member (86), the skew correcting mechanism causes the transport member (76) to transport the sheet by a short distance to form a loop on a side of the tip end of the sheet (Fig. 5e) and thereafter causes the transport member to perform the releasing operation (Figs. 5A and 5e; via to allow the sheets to go through the folding mechanism 80 and 90).

Regarding claim 18: further comprising a sheet folding postprocessing apparatus (Fig. 5A; via 12) which applies a predetermined postprocess on a sheet that has been subjected to a folding process by the sheet folding apparatus, see for example (Figs. 1 and 5A).

Regarding claim 19: further comprising a control device which controls at least the sheet folding apparatus and the sheet folding postprocessing apparatus in accordance with a postprocessing mode applied on the sheet (column 4, lines 24, 25, and 31-36) via the computer processing unit monitor each document 18 as it proceeds through the system and as shown in Figs. 2-4 document 18 in C fold, Z fold, or half fold done by the folding apparatus 12 as shown in Fig. 5A.

Regarding claim 20: wherein the control device houses a letter-folded sheet into a sheet accommodating device in the sheet folding apparatus, under conditions of performing a letter folding process on the sheet by the sheet folding apparatus (Figs. 2-4, 5A, and 5B).

Regarding claim 21: wherein the control device guides a folded sheet to the sheet folding postprocessing apparatus, under conditions of performing Z-folding (Fig. 2) other than letter folding on the sheet by the sheet folding apparatus (Fig. 5A).

Art Unit: 3721

Regarding claim 31: wherein the plurality of modes of folding include letter C-folding, letter Z-folding and size A3 Z-folding (Figs. 5B, 6B, and 7B).

Regarding claim 32: wherein the sheet folding unit includes a plurality of folding mechanisms in the sheet path, at least one of the folding mechanisms includes a folding member (Fig. 5A; via roller 80 and 90) which is disposed in the sheet path to nip-transport the sheet; a transport member (Fig. 5; via rollers 78 and 80) which is disposed in the sheet path upstream from the folding member to nip-transport the sheet; and a tip end guide member (Fig. 5; via adjustable 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet, a plurality of modes of folding can be applied on the sheet by moving the tip end guide member that is movable (Figs. 5A, 6A, and 7A)

Regarding claim 33: Viens discloses the sheet folding unit which applies folding on a sheet as the sheet proceeds along a single sheet path (column 4, lines 61-64; via 12); includes a plurality of folding mechanisms in the sheet path, at least one of the folding mechanisms includes a folding member (Fig. 5A; via roller 80 and 90) which is disposed in the sheet path to nip-transport the sheet; a transport member (Fig. 5; via rollers 78 and 80) which is disposed in the sheet path upstream from the folding member to nip-transport the sheet; and a tip end guide member (Fig. 5; via adjustable 86) which is disposed in the sheet path upstream from the folding member (80 and 90) to restrict a position of a tip end of the sheet, a folding modes can be applied on the sheet by moving the tip end guide member that is movable (Figs. 5A, 6A, and 7A); wherein one of a plurality of folding modes can be applied on the sheet as the sheet proceeds along a single path (Figs. 5A, 6A, 7A, 8A, and 9A).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Viens (5,554,094).

Viens discloses a feeding mechanism nips the sheet that has subjected to skew correction by the skew correcting mechanism, by the transport member (via nip 76) and feeds the sheet that has been subjected to skew correction to the folding member (Figs. 5A and 5e; via 80 and 90). Viens does not disclose that setting a transportation speed of the transport member to a speed which is equal to or lower than a speed of the folding member. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Viens's folding apparatus by setting a transportation speed of the transport member to a speed which is equal to or lower than a speed of the folding member, as a matter of engineering design choice, since the examiner takes an official notice that having two different speed in same apparatus such as the feeding speed different than the folding speed is old, well known, and available in the art, in order to improve and avoid any jam in the folding apparatus.

***Response to Arguments***

Applicant's arguments filed 07/27/2006 have been fully considered but they are not persuasive.

Art Unit: 3721

Applicant argue in pages 12 and 13 of the filed arguments that Viens's reference does not disclose the claimed folding mode selecting device, instead Viens teaches an operator or user manually changes each folding apparatus 12 to perform either Z-folding, C-folding, or half folding of sheets, (column 4, line 61 through column 5, line 8), applicant further argue that the user can not be the equivalent of an auto folding mode selecting device.

The examiner maintains that Viens's references discloses the use of computer 14B by the folding station 12 to control the folding process. Viens discloses different folding mode as shown in Figs. 2-4, while referring to the use of computer to control the folding station, that make it inherent such folding mode selecting device is present.

Note that Viens no where in the reference discloses the use of manually replacing station 12 as was argued by the applicant in page 13, instead Viens only discloses that "therein illustrated are three different types of folds which can be accomplished by the folding apparatus 12 of the present invention depending how the folding apparatus 12 is set up by the user" (column 4, lines 61-64), that only means the user only controls the set up not manually replacing the folding station 12 and such set up could mean auto mode as by selecting which type of fold needs to be done the user select such type and based on the selection the machine automatically adjust to such selection.

Applicant further argue in page 14 of the filed arguments that the sheet folding apparatus 12 are manually exchanged from one to another, applicant referred to column 1, lines 65-67. The examiner maintains that such arguments not supported anywhere in the reference, as in column 1, lines 65-67 only referring to apparatus which can be easily converted to accomplish C-folding, Z-folding, or half-folding, but there is no where in the reference discloses what applicant

Art Unit: 3721

is arguing about of the manual use to replace the folding station. It seems that applicant is arguing of something not clearly disclosed in the reference. Viens's reference broadly can be considered as having computer to automatically controlling the folding station and as Viens discloses different type of folds that make it inherent that such each type of fold can be chosen by the user to automatically controlling the folding station 12 to achieve such fold.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

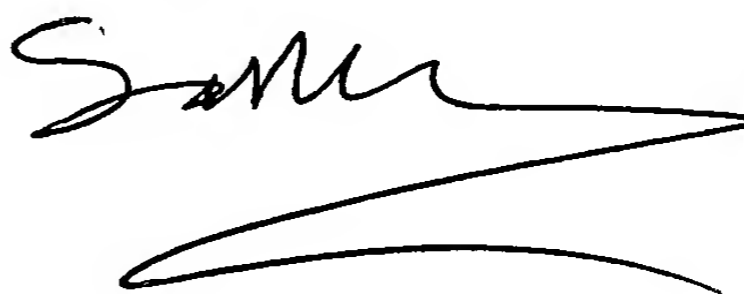
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameh H. Tawfik whose telephone number is 571-272-4470. The examiner can normally be reached on Tuesday - Friday from 8:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3721

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sameh H. Tawfik  
Primary Examiner  
Art Unit 3721

A handwritten signature in black ink, appearing to read 'Sameh', followed by a long, sweeping horizontal line that ends in a small upward hook.

ST.